



### Company Size

125 employees

### Location

Plano, Texas

### Industry

Technology

### Overview

Applied Concepts, Inc. of Plano, Texas manufactures Stalker Radar, the leading speed measurement radar system used by police departments around the world. The company continues to break new ground, delivering innovative solutions that enhance public safety and protect police officers on the job. Its newest offering, CopTrax, is a sophisticated web-based in-car video system that streams video in real time from police patrol cars to provide an overview of events as they unfold, providing agencies with greater situational awareness, better asset coordination, and more accurate event monitoring capabilities.



## Case Study:

# Applied Concepts, Inc.

CopTrax In-Car Police Video System Uses Logitech Webcams to Provide Complete Incident Overview in Real Time

Selected for its razor-sharp image quality, stable frame rate, and H.264 video compression standard, the Logitech HD Pro Webcam C920 is a vital component for mission-critical applications

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In contrast to most in-car video systems that require the use of bulky DVRs (Digital Video Recorders), CopTrax uses existing technologies, eliminating the need to purchase expensive hardware for each patrol car. To keep costs down, the CopTrax system was designed to use a plug-and-play USB webcam that seamlessly plugs into the vehicle's existing laptop. "We were frustrated with the quality of the webcams we initially tested," said Bill Switzer, video specialist at Applied Concepts. "Ultimately, we tried the Logitech webcam and not only did we not have any of the issues we were previously having, the quality was excellent. We standardized on the Logitech HD Pro Webcam C920 as the front-dash camera for the CopTrax in-car video system because it offers many advanced features such as video compression, a stable frame rate, and stunning image and audio quality without the huge capital investment that some of the more traditional in-car systems require."

### Video as Evidence

The CopTrax in-car video system delivers a wealth of information that the police chief down to the shift supervisor can use to protect police officers and better understand what crime is occurring in a specific area. "After doing our research, we found that the Logitech HD Pro Webcam C920 stands above and beyond any other product with similar specifications," said Switzer. Featuring Carl Zeiss optics and a premium 20-step autofocus, the Logitech C920 offers razor-sharp images with less distortion in every situation. "Plain and simple, the Logitech C920 can deliver the image clarity needed when people's lives and officers' reputations are on the line."

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Bill Switzer, video specialist  
Applied Concepts

Leveraging Logitech Fluid Crystal Technology, a proprietary algorithm that automatically adjusts the frame rate, color, and sharpness to provide the best possible picture and motion, the Logitech C920 webcam delivers exceptional image clarity at any time of the day or night. "Crime doesn't sleep, so the quality of video has to be good in any condition – dark, light, hot, cold... You name it," explained Switzer. "There is no environment in the world more brutal or rugged than a police vehicle. Equipment must be extremely durable. The Logitech webcam easily stands up to the challenging conditions and far surpasses the competition."

## Capturing the Big Picture

Because the system's previous webcam did not use compression technology, video was transmitted raw and put a huge drain on laptop resources. "The Logitech HD Pro Webcam C920 uses the H.264 compression standard to compress video file size significantly," explained Switzer. Using H.264, the Logitech HD Pro Webcam C920 removes redundant information from the video stream to transform a large, raw video file into one that requires about half the space of the MPEG-2 format, the standard for a DVD-quality video. "We can add GPS and other event information to the compressed file for a complete incident overview while still putting less demand on each laptop." In addition, CopTrax can store video in a buffer – up to 30 seconds before the in-car system is triggered to capture critical information leading up to an event. "Now we can capture as much data as we need to make informed decisions without taxing laptop resources," added Switzer.

Another Logitech C920 feature that is important to the viability of CopTrax is that video is recorded consistently at 30 frames per second for sharp, fast, and smooth video. Because video footage may be used as evidence in court, it is essential that the frame rate match the audio to deliver an accurate record of incidents. "The true end-product is the high-quality video we can capture," explained Switzer. "If timelines get thrown off and video and audio do not sync, the video may not be admissible in court."

## A Cost-Effective System

By leveraging the patrol vehicle's existing laptop as the dedicated processor and using either the agency's existing server infrastructure or the Cloud for file storage, archiving, and retrieval, CopTrax offers a much lower cost of ownership than traditional in-car video systems. "Total system cost is an important factor for law enforcement agencies, a key consideration in order to have widespread deployment of CopTrax," said Switzer. "The affordability of the Logitech C920 definitely helps us meet that goal."

"And because both the CopTrax software and the Logitech webcams can work on older laptops as well as new ones, agencies don't have to upgrade their entire computer platform to deploy our solution," noted Switzer. "In addition, agencies do not need to replace all in-car video systems in their fleets every time vehicles are upgraded – the entire solution from software to webcam can be easily moved to the new vehicle."

## A Supportive Team

"The support we've received from Logitech has been phenomenal. The entire team has gone above and beyond to help us quickly and easily integrate the Logitech webcam into the CopTrax solution," concluded Switzer. "Because video quality is a huge factor to our success, Logitech is the ideal partner as we roll out the CopTrax in-car video system to law enforcement agencies around the world."

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## Challenges

- Deploy a webcam that delivers superior image quality – so clear and fluid that it can stand up as evidence in court
- Cost-effective USB webcam that can easily work with law enforcement agencies' existing laptops without draining CPU resources

## Solutions

CopTrax standardized on the Logitech HD Pro Webcam C920 as the front-dash webcam for its in-car video system designed for use in police patrol vehicles.

## Benefits

- Cost-effective, high-quality webcam that works with patrol vehicles' existing laptops
- Razor-sharp image quality day and night
- Stands up to rugged environment of patrol vehicle
- H.264 video compression standard reduces file size to lower demand on laptop CPU
- Consistent 30 frames per second to ensure video and audio synchronization
- Excellent service and support

## Toolkit



Logitech HD Pro Webcam C920